Remarks

I. 35 USC 102

The Office Action rejects claims 1-4, 10-14, 19 and 20 under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,246,552 to Soeno et al. (Soeno). The Office Action states:

> As per claim 1, Soeno et al. (US 6,246,552 B1) discloses a device (including 1,2) for reading or writing information, the device comprising: an electromagnetic transducer (1) including a plurality of solid transducer layers (inherently provided, e.g., the poles and gap of an inductive head which must necessarily be present in order to operate), a substrate (e.g., 43) adjoining said transducer (1), said substrate (43) shaped as a rigid body adjacent to said transducer (1) and as a plurality of flexible elements (e.g., arms affixing (44) to frame (43) as seen in FIG. 5; or arms (431), (432) as seen in FIGS. 7(A,B), etc.) distal to said transducer (1), and an actuator (PZT elements between (44) and frame (43) as seen in FIGS. 5, 7, etc.) attached to said substrate (43) distal to said transducer (1).

Applicant respectfully disagrees with the Office Action assertion that Soeno discloses "a substrate (e.g., 43) adjoining said transducer (1)." In contrast, Soeno's "fixed part 43" is separated from its "electromagnetic transducer element 1" by "slider 2." For this reason alone claim 1 is not anticipated by Soeno.

Applicant also respectfully disagrees with the Office Action assertion that Soeno discloses "an electromagnetic transducer (1) including a plurality of solid transducer layers (inherently provided, e.g., the poles and gap of an inductive head which must necessarily be present in order to operate)." The poles and gap of an inductive head can also be formed with an iron core mounted on the trailing end of a slider. The side views of Soeno (e.g., FIGs. 13 and 17) seem to show such an appendage mounted on the trailing end of "slider 2." Alternatively, sliders have also been formed with a magnetic (e.g., ferrite) substrate which forms part of the inductive head. This also could be the reason for the appendage shown in the side views. Thus Soeno does not disclose "an electromagnetic transducer including a plurality of solid transducer layers" that are naturally and necessarily present, and claim 1 is not anticipated by Soeno for this reason also.

Applicants note that the Office Action defines "a plurality of flexible elements" as "arms affixing (44) to frame (43)" and also defines "an actuator" as "PZT elements

between (44) and frame (43)." In contrast, claim 1 defines a "*substrate* shaped as a rigid body adjacent to said transducer and as a plurality of *flexible elements* distal to said transducer, and an *actuator attached to said substrate* distal to said transducer." For this reason also Soeno does not anticipate claim 1.

Claims 2-4, 6-8 and 10 are not anticipated by Soeno for at least the reasons given above for claim 1.

Regarding claim 11, the Office Action states:

> Additionally, as per claim 11, the device further is defined as comprising (as per embodiment depicted in FIG. 21): a wafer substrate piece (3) disposed between an electromagnetic transducer (1) and an electrorestrictive actuator (41, 45, 55 as seen in FIG. 21), said substrate piece shaped as a rigid body adjoining said transducer and as a flexible element (flex arms of (3)) connecting said rigid body to said actuator.

Applicant respectfully disagrees with the Office Action assertion that Soeno discloses "a wafer substrate piece (3)"..."adjoining said transducer (1)." In contrast, Soeno's "suspension 3" is separated from its "electromagnetic transducer element 1" by "slider 2." For this reason claim 11 is not anticipated by Soeno.

Moreover, applicant respectfully disagrees with the Office Action assertion that Soeno discloses "a wafer substrate piece (3)." Instead, Soeno states "The suspension 3 is formed by bending, punching or otherwise processing a resilient stainless sheet." See column 1, lines 43-45.

Claims 12-14 and 19 are not anticipated by Soeno for at least the reasons given above for claim 11.

The Office Action further states, with regard to claim 20:

> Additionally, as per claim 20, the device is further defined as comprising: an electromagnetic transducer (1) including a plurality of solid transducer layers (as discussed per claim 1 and/or 11), a substrate (e.g., 3 as seen in FIG. 21) adjoining said transducer (1), said substrate (3) shaped as a rigid body adjacent to said transducer (1) and as a plurality of flexible elements (flex arms of (3)) distal to said transducer (1), and an actuator means (4) attached to said substrate (3) "distal" to said transducer (1).

Applicant respectfully disagrees with the Office Action assertion that Soeno discloses "a substrate (3) adjoining said transducer (1)." In contrast, Soeno's "suspension

3" is separated from its "electromagnetic transducer element 1" by "slider 2." For this reason alone claim 20 is not anticipated by Soeno.

Applicant also respectfully disagrees with the Office Action assertion that Soeno discloses "an electromagnetic transducer (1) including a plurality of solid transducer layers (as discussed per claim 1 and/or 11)." As discussed above with regard to claim 1, Soeno does not disclose "an electromagnetic transducer including a plurality of solid transducer layers" that are "naturally and necessarily present." Therefore claim 20 is not anticipated by Soeno for this reason also.

II. 35 USC 103

The Office Action rejects claims 9, 17 and 18 under 35 USC 103(a) as being unpatentable over Soeno. The Office Action states:

> As per claims 9 and 17, although Soeno et al. (US 6,246,552 B1) does not expressly show wherein the back surface of (43) or (3) has a protrusion extending away from the media-facing surface, Official notice is taken that protrusions provided between sliders and their supports to allow for pitching motion of the slider relative to a medium surface, is a concept that is notoriously old and well known in the art.

Applicant respectfully objects to the Office Action assertion of "Official notice." Should the Examiner wish to assert "Official Notice" he is respectfully requested to submit an affidavit as required by 37 CFR 1.104(d)(2). Without such an affidavit, the Office Action fails to provide a prima facie case of obviousness for claims 9 and 17.

Regarding claim 18, the Office Action states:

> As per claim 18, although Soeno et al. (US 6,246,552 B1) remains silent with respect to the composition of the rigid body and actuator containing a material including silicon, Official notice is taken that actuators and their associated rigid bodies formed as containing the semiconductor silicon, are notoriously old and well known in the art.

Applicant again respectfully objects to the Office Action assertion of "Official notice." Should the Examiner wish to assert "Official Notice" he is respectfully requested to submit an affidavit as required by 37 CFR 1.104(d)(2). Without such an affidavit, the Office Action fails to provide a prima facie case of obviousness for claim 18.

Moreover, those elements of independent claims 1, 11 and 20 noted as missing from Soeno in the discussion of 35 USC 102 would not have been obvious to add to Soeno to achieve a 35 USC 103 rejection, absent the teaching of the present invention.

Conclusion

Applicant has responded to each of the items of the Office Action, showing that the Office Action has not presented a prima facie case of anticipation or obviousness for any of the claims. As such, applicant respectfully asserts that the application is in condition for allowance, and a notice of allowance is solicited.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MS No Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on August 12, 2003.

Date: 8-12-03

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